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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,721	01/22/2004	Edgar N. Rudisill	SS2910USCNT1	5196

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E I DU PONT DE NEMOURS AND COMPANY
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WILMINGTON, DE 19805

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/762,721	RUDISILL ET AL.	
	Examiner	Art Unit	
	Norca L. Torres-Velazquez	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 76,79,81,83,86,87,89,91 and 93-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 76,79,81,83,86,87,89,91 and 93-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The objection of the claims stated in previous office action are withdrawn herein in view of Applicants' amendment to the claims now having proper dependent form.
2. Applicants have amended the claims and incorporated structural limitations to define the thermally bonded nonwoven fabric of the present invention. The 35 U.S.C. 112, second paragraph rejections of the claims as being indefinite for reciting only physical properties such as basis weight, grab tensile strength, Frazier permeability and hydrostatic head has been withdrawn.
3. With regards to the rejection under 35 U.S.C. 102/103 over OFOSU et al. (US 6,268,302), Applicants have amended the claims to recite "hard yarn meltspun polyolefin fibers" and argue that the object of the OFOSU et al. invention is to "provide a spunbond polyolefin nonwoven fabric or web which is softer than those conventionally produced but which has comparable strength characteristics. (Col. 1, lines 36-40)

It is noted that the term "hard yarn fibers" is defined in the Specification of the present application as fibers that are made by quenching and drawing the fibers after they are spun so that the polymer chains are oriented within the fiber. (Page 4, lines 18-21) Therefore, Applicants' arguments are not commensurate in scope with the claims since the term "hard yarn fiber" relates to a fiber produced by quenching and drawing, and not necessarily to the softness or hardness of the material produced as implied in the arguments. It is the Examiner's interpretation that a fiber produced by quenching and drawing reads on the presently claimed hard yarns. The OFOSU et al. reference teaches drawing of the fibers, therefore, it is the

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Examiner's position that the fibers produced by the reference will produce the oriented structure claimed herein. With regards to quenching, this is known to be typical melt-spinning, which is used by the art of record. It is further noted that the prior art meets the claimed limitations of cross-sectional area of the fibers, the basis weight and also teaches the use of a repellent fluorocarbon finish as stated below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 76, 79, 81, 83, 86, 87, 89, 91 and 93-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over OFOSU et al. (US 6,268,302 B1) in view of McAmish et al. (US 4,908,163).

OFOSU et al. is directed to a soft and strong nonwoven spunbond polyolefin fabric for use in medical products and protective covers. (Col. 1, lines 42-67) The reference teaches the use of thermal calendering in the formation of the fabric. (Col. 5, lines 1-5) The reference teaches the use of drawing to produce the fibers. (Col. 5, line 48) OFOSU et al. discloses a spunbond/spunbond (SS) laminate with a basis weight of each of the layers of 34 gsm and that both layers were made polypropylene. In their examples the reference uses polypropylene of different melt flow rate. (Columns 9-10) The reference anticipates the limitations of a bonded nonwoven fabric comprising at least one nonwoven layer of spunbond fibers and the fabric

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having a basis weight between about 13-125 g/m² [the basis weight of the fabric is 68 gsm when the basis weight of both layers is added]. The product of OFOSU et al. meets the limitations of a bonded nonwoven fabric with at least one nonwoven layer of spunbond fibers and meets the basis weight limitation. Further, OFOSU et al. also teaches spunbond/meltblown/spunbond embodiments in their invention. (Col. 5, lines 6-8) OFOSU et al. teaches that the fibers of their invention have an average diameter of from about 0.5 microns to about 50 microns. (Col. 2, lines 35-38) [The corresponding cross-section for fibers with these diameters is 0.785 - 7850 μm^2].

While OFOSU et al. teaches the use of their fabric in medical products and protective covers, it fails to teach the use of a fluorochemical coating.

McAMISH et al. discloses a nonwoven fabric made of unreinforced microfiber (melt-blown) webs that are suitable for use as medical fabrics. The reference teaches that for applications requiring repellency, such as for surgical gowns and drapes, the fabric can be treated further with suitable repellent chemicals. Fluorochemicals are normally employed to impart repellency. (Col. 10, lines 64-68)

It is further noted that the structure of fabric of the McAmish et al. reference is very similar to the structure of the present invention in that it is a bonded nonwoven fabric with basis weight within the ranges claimed herein. (Refer to Col. 3, lines Col 11, lines 10-13) Further, it provides grab tensile values and Frazier permeability that would read on the present application. However, the reference uses melt-blown fibers instead of spunbond fibers. (Also refer to first table on Column 15, fabric 1) Fabrics 3 and 7 of that table disclose values for fabrics that comprise spunbond web layers. (Refer to Col. 14, lines 48-51, 65-68 and first table of Col. 15)

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Since both, OFOSU et al. and McAMISH et al. are directed to nonwoven fabrics, the purpose disclosed by McAMISH et al. would have been recognized in the pertinent art of OFOSU et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric the OFOSU et al. and provide with a fluorochemical coating with the motivation of imparting repellency and using the fabric in applications such as surgical gowns as disclosed by McAMISH et al. (Col. 10, lines 64-68).

Although OFOSU et al. and McAMISH does not explicitly teach the claimed grab tensile strength, Frazier permeability, hydrostatic head properties and cross sectional void percentage of the thermally bonded nonwoven fabric, it is reasonable to presume that these properties are inherent to the combination of OFOSU et al. and McAMISH. Support for said presumption is found in the use of like materials (i.e. layers of spunbond fibers produced by drawing with similar cross-sections, the use of thermal calendaring to form the fabric, basis weight that reads on the claimed values). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of a grab tensile strength in both the MD and the CD between at least about $1 \text{ N}/(\text{g}/\text{m}^2)$, normalized for basis weight, and the combinations of Frazier permeability at and hydrostatic heads claimed herein would obviously have been present once the combination of OFOSU et al. and McAMISH is provided. Also the cross sectional void percentage of at least about 85 percent would obviously have been present once the product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102. Reliance upon inherency is not

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improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

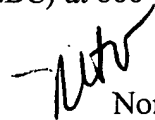
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Norca L. Torres-Velazquez
Examiner
Art Unit 1771

January 7, 2005